



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,031	04/18/2005	Byung-Hoon Han	0662-0194PUS1	1531
2292 7590 12/13/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER PRATT, HELEN F	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 12/13/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/509,031	Applicant(s) HAN ET AL.	
	Examiner Helen F. Pratt	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. In particular, the phrase "of being removed the unpleasant smell of spirulina" is not grammatical, and the rest of the claim language should conform to U. S. practice.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 5 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donati WO 87/00731 in view of Gaynor (5,744,187).

Donati discloses a process of making a spirulina (an algae) composition by boiling the algae for 10 to 15 minutes, subjecting the Spirulina algae to enzymes, centrifuging, alcoholic extraction of the residue, and centrifugation (page 3, lines 1, last para.). Claim 1 differs from the reference in suspending the algae in water, subjecting it to osmosis, heating the mixture, condensing it, and freeze-drying the mixture. However, in order for the alga to be boiled, it has to be suspended in water. Since the alga is suspended in water, it is seen that osmolysis occurs and that the chromoprotein leaks out of the cell membranes. The claims do not exclude the addition of enzymes. As the mixture is boiled, a certain amount of condensing is seen to have occurred, and the claim does not say to what degree the mixture is condensed. The reference discloses that an aqueous extract results from the first stage of centrifugation (page 3, to paragraph 4). Nothing new is seen in condensing under reduced pressure, which is a well-known method to remove water as is freeze drying, especially as dried algae is well known as shown by Gaynor (col. 1, lines 25-38, lines 50-52). Therefore, it would have been obvious to treat as disclosed by Donati, and to further dry the product as shown by Gaynor in the process of Donati.

Claims 3, 5 and 8 further require that the spirulina (alga) is heat treated at from 60 to 130 C. Donati discloses coagulation at boiling temperatures, which is within the

claimed range (page 3, 3rd para.). Therefore, it would have been obvious to treat at within the claimed temperatures as disclosed by Donati.

Claims 1 and 3 are is also a product by process claims. The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796. The limitations of claims 1 and 3 are present in the product since the process has been shown as above and are obvious for those reasons.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donati in view of Gaynor as applied to the above claims, and further in view of Shermer et al. (4,330,407).

Claim 7 further requires deaerating the mixture after the osmolytic treatment. Shermer et al. disclose that it is known to remove oxygen from algae before coagulation, i. e. denaturation (abstract). Therefore, it would have been obvious to remove air or oxygen as shown by Shermer et al. in the process of Donati in order to have an oxygen- free product before coagulation (heating).

The limitations of claim 2 as to the product have been shown above and are obvious for those reasons. See *In re Thorpe* as above.

Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donati in view Gaynor and further in view of Shermer as applied to the above claims, and further in view of Malhotra et al. (5,746,814).

Claim 9 further requires adding alcohol to prevent foaming at the time of deaeration. However, Malhotra et al. disclose that alcohol can be used as a defoamer (col. 1, lines 60-68). Therefore, it would have been obvious to add an alcohol to prevent foaming when foaming occurs for its known function in the process of the combined references.

The limitations of claim 4 as to the product have been shown above as the process has been disclosed and the product would therefore have the claimed properties. See In re Thorpe as above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 571-272-1404. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number:
10/509,031
Art Unit: 1794

Page 6

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

Hp 12-3-07


HELEN PRATT
PRIMARY EXAMINER